## REMARKS

This communication is in response to the Office Action dated October 8, 2003. Claims 1-20 are pending in the present Application. Claims 1-20 have been rejected. Claims 1, 9, 12, 13, 14, 15, 17 and 19 have been amended for clarification. Claims 4, 18 and 20 have been canceled. Claims 1-20 remain pending in the present Application.

The present invention includes a data storage device. The data storage device includes a storage medium, a nanometer-scaled data storage areas in the storage medium, an energy-emitting tip positioned in close proximity to the storage medium, a fluid medium positioned between the energy-emitting tip and the storage medium wherein the fluid medium comprises a ferrofluid and particles contained in the fluid medium.

***Specification Objections***

The Examiner states:

> **The specification of the disclosure is objected to because of the following:**
> **(a) on page 1, the application number of the related application is missing. Correction is required.**

Applicant asserts that the specification has been amended to address the above-referenced informality.

***Claim Objections***

The Examiner states:

**Claims 12-14 and 17 are objected to because of informalities.**

Applicant asserts that claims 12-14 and 17 have amended to address the above-referenced informalities.

***102 Rejections***

For ease of review, Applicant reproduces independent claims 1, 9 and 15 herein below:

1. A data storage device comprising:
a storage medium;
nanometer-scaled data storage areas in the storage medium;
an energy-emitting tip positioned in close proximity to the storage medium;
a fluid medium positioned between the energy-emitting tip and the storage medium wherein the fluid medium comprises a ferrofluid; and
particles contained in the fluid medium.

9. A data storage device comprising:
a storage medium;
nanometer-scaled data storage areas in the storage medium;
an energy-emitting tip positioned in close proximity to the storage medium; and
molecules positioned between the energy-emitting tip and the storage medium wherein the molecules are at least partially immersed in a fluid medium.

15. A method of data storage comprising:
providing a storage medium comprising nanometer-scaled data storage area;
positioning an energy-emitting tip in close proximity to the storage medium;
guiding energy emitted from the energy-emitting tip to the storage area wherein the guiding step comprises channeling the energy emitted through particle in a fluid medium between the storage medium and the energy-emitting tip wherein the fluid medium comprises a ferrofluid;
altering a state of the storage areas with the emitted, guided energy.

The Examiner states:

> **Claims 1, 2, 8, 9, 10, 14, 15, 16, 18 and 19 are rejected under 35 U.S.C. § 102(e) as being anticipated by Manalis et al. (U.S. Patent 6,519,221).**

Claims 1 and 15

Applicant asserts that claims 1 and 15 have been amended to include allowable subject matter. Applicant accordingly asserts that claims 1 and 15 are allowable in view of the Examiner's cited reference.

Claims 2, 8, 16 and 19

Since claims 2, 8, 16 and 19 are respectively dependent on claims 1 and 15, the above-articulated arguments with regard to claims 1 and 15 apply with equal force to claims 2, 8, 16 and 19. Accordingly, claims 2, 8, 16 and 19 should be allowed over the Examiner's cited reference.

Claims 9-14

The recited invention of independent claim 9 includes a data storage device that includes a storage medium, a nanometer-scaled data storage areas in the storage medium, an energy-emitting tip positioned in close proximity to the storage medium and molecules positioned between the energy-emitting tip and the storage medium ***wherein the molecules are at least partially immersed in a fluid medium***. (Emphasis added.)

The Examiner asserts that claim 9 is anticipated by the Manalis et al. reference. Manalis discloses an atomic force microscope (AFM) tipped with a single-wall conductive nanotube is operated to write bits onto a metal substrate by oxidizing the surface. The oxidized microregions project above an otherwise flat

surface, and can therefore be detected--that is, the written bits can be read--using the same AFM arrangement.

The Examiner asserts that Manalis discloses molecules (in a liquid form) positioned in between the energy-emitting tip and the storage medium. Specifically, Manalis discloses that a tip contacts ***a thin layer of fluid*** absorbed on a substrate as it is scanned over the surface of the substrate. (See Manalis col. 2 lines 41-43.) Essentially, the Examiner is equating the thin layer of fluid with the recited molecules of claim 9. Applicant respectfully disagrees.

Claim 9, as amended, recites "... molecules positioned between the energy-emitting tip and the storage medium ***wherein the molecules are at least partially immersed in a fluid medium***". Manalis simply discloses the employment of a thin layer of fluid. Applicant accordingly asserts that the employment of a thin layer of fluid, as disclosed by the Manalis reference, is clearly different from the employment of molecules that are at least partially immersed in a fluid medium as recited in claim 9 of the present invention.

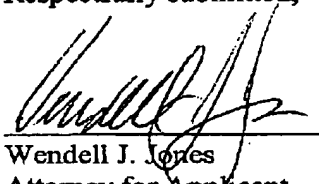
Consequently, since the employment of a thin layer of fluid, as disclosed by the Manalis reference, is clearly different from the employment of molecules that are at least partially immersed in a fluid medium, as recited in claim 9 of the present invention, claim 9 is clearly distinguishable from the Manalis reference. Therefore, claim 9 is allowable over the Examiner's rejection.

Claim 10-14

Since claims 10-14 are dependent on claim 9, the above-articulated arguments with regard to claim 9 apply with equal force to claims 10-14. Accordingly, claims 10-14 should be allowed over the Examiner's cited reference.

Applicant believes that this application is in condition for allowance. Accordingly, Applicant respectfully requests reconsideration, allowance and passage to issue of the claims as now presented. Should any unresolved issues remain, Examiner is invited to call Applicant's attorney at the telephone number indicated below.

Respectfully submitted,



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